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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,012	02/17/2005	Yoshito Tobe	1422-0663PUS1	5008

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EXAMINER

CUTLIFF, YATE KAI RENE

ART UNIT	PAPER NUMBER
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1621

NOTIFICATION DATE	DELIVERY MODE
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07/18/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

<p align="center">Office Action Summary</p>	<p>Application No.</p> <p align="center">10/525,012</p>	<p>Applicant(s)</p> <p align="center">TOBE ET AL.</p>	
	<p>Examiner</p> <p align="center">Yate K. Cutliff</p>	<p>Art Unit</p> <p align="center">1621</p>	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____ |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :02/17/2005;
05/17/2005; 6/13/2005; 10/11/2005.

DETAILED ACTION

1. Applicant's election with traverse of Species E in the reply filed on April 5, 2007 is acknowledged. The traversal is on the ground(s) that Examiner failed to establish that the present species lacked unity of invention under PCT Rule 13.1 because the Examiner failed to specify how the reference, Kenichiro Nakashima, et al., *Talanta*, 1984, Vol. 25, No. 9, pages 749-751, taught a compound that included the features of applicant's genus for formula (I).

This is not found persuasive because on page 5, in paragraph 1 of the restriction requirement it is stated that benzothiazolylphenol, is a compound taught by Nakashima, et al. (see page 749) and is covered by Applicant's claim 2.

The requirement is still deemed proper and is therefore made FINAL.

Priority

2. It is noted that this application appears to claim subject matter disclosed in prior PCT/JP03/07313, filed June 10 2003, which claims priority from JP Application No. 2002.239777, filed August 20, 2002. A reference to the prior application must be inserted as the first sentence(s) of the specification of this application or in an application data sheet (37 CFR 1.76), if applicant intends to rely on the filing date of the prior application under 35 U.S.C. 119(e), 120, 121, or 365(c). See 37 CFR 1.78(a). For benefit claims under 35 U.S.C. 120, 121, or 365(c), the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of all nonprovisional applications. If the application is a utility or plant application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the specific reference to the prior application

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must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. If the application is a utility or plant application which entered the national stage from an international application filed on or after November 29, 2000, after compliance with 35 U.S.C. 371, the specific reference must be submitted during the pendency of the application and within the later of four months from the date on which the national stage commenced under 35 U.S.C. 371(b) or (f) or sixteen months from the filing date of the prior application. See 37 CFR 1.78(a)(2)(ii) and (a)(5)(ii). This time period is not extendable and a failure to submit the reference required by 35 U.S.C. 119(e) and/or 120, where applicable, within this time period is considered a waiver of any benefit of such prior application(s) under 35 U.S.C. 119(e), 120, 121 and 365(c). A benefit claim filed after the required time period may be accepted if it is accompanied by a grantable petition to accept an unintentionally delayed benefit claim under 35 U.S.C. 119(e), 120, 121 and 365(c). The petition must be accompanied by (1) the reference required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted), (2) a surcharge under 37 CFR 1.17(t), and (3) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional. The petition should be addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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If the reference to the prior application was previously submitted within the time period set forth in 37 CFR 1.78(a), but not in the first sentence(s) of the specification or an application data sheet (ADS) as required by 37 CFR 1.78(a) (e.g., if the reference was submitted in an oath or declaration or the application transmittal letter), and the information concerning the benefit claim was recognized by the Office as shown by its inclusion on the first filing receipt, the petition under 37 CFR 1.78(a) and the surcharge under 37 CFR 1.17(t) are not required. Applicant is still required to submit the reference in compliance with 37 CFR 1.78(a) by filing an amendment to the first sentence(s) of the specification or an ADS. See MPEP § 201.11.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

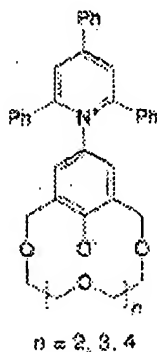
4. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Mark Doleman, et al. et al. Chromogenic Reagents December 1996, Vol. 121, p 1775-1778.

Applicant's claim is as follows: "an optically active compound having an unsaturated bond at an optically active binding site, wherein the unsaturated bond and a fluorescent substituent or a substituent capable of imparting fluorescence are united in a conjugated manner. "

Applicant's 3 claims a chiral sensor of the compound of claim 1 or 2.

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The disclosure in Doleman, et al. teaches the compound 13 as set out below:

**13**

Compound 13, on page 1777 of Doleman et al. has an unsaturated bond at an optically active binding site where the unsaturated bond and the fluorescent substitute are united in a conjugated manner. Therefore, the optically active compound of claim 1 and the chiral sensor of claim 3 are anticipated by the reference.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Christian Reichardt et al., Pyridinium N-phenolate betaine dyes and their application to the characterization of the polarity of solvents. Part 22. Syntheses and UV/Vis spectroscopic properties of solvatochromic, halochromic, and chiro-solvatochromic

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pyridinium N-phenolate betaine dyes with four stereogenic centers", Liebigs Annalen/Recueil, 1997, vol 4, page 707-720.

Applicant's claim 2 teaches an optically compound of formula (I), wherein R1 is an aromatic group or an aromatic ethynyl group; R2 is a hydrogen atom or an alkyl group having 1 to 10 carbon atoms; each of R3, R4, R5, R6, R7, R8, R9 and R10 is independently a hydrogen atom, or an alkyl group having 1 to 30 carbon atoms, a cyclic alkyl group having 3 to 30 carbon atoms or an aryl group having 6 to 30 carbon atoms, each of which may have a substituent, with proviso that each of R4 and R5, and R8 and R9 may be bonded to form an alkylene group having 2 to 60 carbon atoms; and each of R1 and R2 is independently a hydrogen atom or an alkyl group having 1 to 15 carbon atoms which may have a hetero-atom, with proviso that R1 and R2 may be bonded to form an alkylene group having 2 to 30 carbon atoms which may have a hetero-atom.

Applicant's 3 claims a chiral sensor of the compound of claim 2.

The disclosure in Reichardt et al., on page 790, it reads on a pyridinium salts 17a and 17b, which includes an aromatic group, and a polyether having aryl groups with 6 carbon atoms bonded thereto. Compounds 17a and 17b of Reichardt et al. are clearly species of genus compound formula (I). Specifically, as set out in Applicant's claim 1 where R1 is an aromatic group, R2 is a hydrogen, R3 – R10 is independently a hydrogen atom or an aryl group having 6-30 carbon atoms, each of which may have a substituent, and R11 and R12 are bonded to form an alkylene group having 2 to 30 carbon atoms which may have a hetero atom.

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Therefore, the compounds of claims 1 and 2, and the sensor of claim 3 comprising the compound of claims 1 and 2 is anticipated by the reference.

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1-3 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1-6 of copending Application No. 10/591920. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1-6 of pending application no 10/591920 disclose various species of that genus, which overlap with the species of claims 1 and 2 in the Application under examination.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Examiner advises Applicant that claims 2 and 3 and claims 1-6 of copending Application No. 10/591920, though not identical, they are not patentably distinct from each other because of the following.

Applicant's claim 2 teaches an optically compound of formula (I), wherein R1 is an aromatic group or an aromatic ethynyl group; R2 is a hydrogen atom or an alkyl group having 1 to 10 carbon atoms; each of R3, R4, R5, R6, R7, R8, R9 and R10 is independently a hydrogen atom, or an alkyl group having 1 to 30 carbon atoms, a cyclic alkyl group having 3 to 30 carbon atoms or an aryl group having 6 to 30 carbon atoms, each of which may have a substituent, with proviso that each of R4 and R5, and R8 and R9 may be bonded to form an alkylene group having 2 to 60 carbon atoms; and each of R11 and R12 is independently a hydrogen atom or an alkyl group having 1 to 15 carbon atoms which may have a hetero-atom, with proviso that R11 and R12 may be bonded to form an alkylene group having 2 to 30 carbon atoms which may have a hetero-atom.

Applicant's 3 claims a chiral sensor of the compound of claim 2.

Pending U.S. PTO application No. 10/591920 teaches a fluorescent molecular wire comprising a polymer main chain having a linked conjugated system to which an optically active substituent is linked so as to be conjugatable form, the optically active substituent being represented by the following formula (I), and where where R1 represents a hydrogen atom or an alkyl group having 1 to 10 carbon atoms; R2, R3, R4, R5, R6, R7, R8, and R9 represent independently a hydrogen atom, a linear alkyl group having 1 to 30 carbon atoms that may have a substituent, a branched alkyl group having 2 to 30 carbon atoms that may have a substituent, a cyclic alkyl group

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having 3 to 30 carbon atoms that may have a substituent, an aryl group having 6 to 30 carbon atoms that may have a substituent, or an aralkyl group having 7 to 30 carbon atoms that may have a substituent, and R3 and R7 may be bonded respectively to R4 and R8 to form an alkylene group having 2 to 60 carbon atoms that may have a substituent; and R10 and R11 represent independently a hydrogen atom or an alkyl group having 1 to 15 carbon atoms that may have a heteroatom, and R10 and R11 may be bonded to form an alkylene group having 2 to 30 carbon atoms that may have a heteroatom.

Claims 2-6 of Application No. 10/591920 further limit the scope of claim 1.

The claims of the Application under examination(U.S. Pat. App. No. 10/525012) lacks the express teaching of a fluorescent molecular wire comprised of an optically active substituent. Basically, the Application under examination discloses a compound of formula (I), which with various R groups substituents to broadly claim, and optically active compound. While claim 1, of pending application no 10/591920 discloses an optically active substituent of formula (I) with substantially an identical core structure and identical definitions for the R groups, even though the R groups are number differently. Further, Claims 1-6 of pending application no 10/591920 discloses various species of that genus, which overlap with the species of claims 1 and 2 in the Application under examination.

9. **No claims are allowed.**

Allowable Subject Matter

10. The elected Species E where R1 is an aromatic ethynyl group and R2 – R12 are as defined in claim 2 is allowable.

The following is a statement of reasons for the indication of allowable subject matter: None of the prior art references teach the optically compound where an aromatic ethynyl is bonded to a fluorescent substituent.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yaté K. Cutliff whose telephone number is (571) 272-9067. The examiner can normally be reached on M-TH 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne Eyler can be reached on (571) 272 - 0871. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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